Dear Aeronautics and Astronautics Alumni and Friends,

Once again, it gives me great pleasure to write you and share a summary of the major departmental news and events for the past academic year.

**FACULTY SEARCH UPDATE**

After having made two additions to our faculty two years ago, the School of Engineering has authorized us to start a new faculty search this year. As always, we will be seeking an exceptional candidate who will develop a program of high-impact research and contribute to an innovative curriculum with leading-edge courses. We will place higher priority on the impact, originality, and promise of the candidate’s work than on the particular sub-area of specialization within Aeronautics and Astronautics (AA).

**NEW DEVELOPMENT: AN UNDERGRADUATE PROGRAM IN AERONAUTICS AND ASTRONAUTICS**

Even though we offer an undergraduate interdisciplinary major in AA in order to provide an opportunity for interested undergraduates to discover the challenges faced in the aerospace field and interact closely with the faculty who teach and do research in AA, we have never offered a full-fledged undergraduate program.

During the last few years, we have experienced, however, an unprecedented demand and interest in an undergraduate curriculum. Specifically, 18 undergraduate students signed up last year for our interdisciplinary major in AA. This corresponds to a sharp rise from the total of 21 undergraduate students who signed up for this major in the last 13 years combined.

The Stanford Student Space Initiative (SSSI) — which is by far Stanford’s largest project-based student group — now has 120 members, 95 percent of whom are Stanford undergraduates.

The Stanford Unmanned Aerial Vehicle Enthusiasts (SUAVE) Engineers and Entrepreneurs counts now 102 members, and approximately 50 percent are undergraduates. Our peers in California, the University of California at Berkeley and Caltech, do not have an undergraduate program in AA either.
For all these reasons, and after a long and careful study that we conducted last year, we have decided to launch next year a full-fledged Undergraduate Program in AA. The School of Engineering is very supportive of our decision. This new initiative is one of the reasons why the dean has authorized the faculty search mentioned above, and will authorize additional positions in the future, as needed. This major initiative will disrupt our lives. However, we are very excited about our forthcoming Undergraduate Program and committed to its success. With your help, we will be one of the top programs in AA not only for graduate studies, but also for undergraduate studies.

FACULTY AND STAFF NEWS

I am also delighted to share with you faculty and staff news. During the past academic year, Professor Antony Jameson received multiple distinctions. To begin, he received the Daniel Guggenheim Medal, which is considered to be one of the greatest honors that can be presented for a lifetime of work in aeronautics. It is given annually to persons who make notable achievements in the advancement of aeronautics. It is awarded jointly by the American Society of Mechanical Engineers, the Society of Automotive Engineers, the American Helicopter Society, and the American Institute of Aeronautics and Astronautics (AIAA). His paper titled “Origins and Further Development of the Jameson-Schmidt-Turkel Scheme” was named by the AIAA Applied Aerodynamics Committee as the Best Aerodynamics Paper from the 33rd AIAA Applied Aerodynamics Conference. He and Dr. Robert Mills received the Specialist Team Silver Award from the Royal Aeronautical Society (UK) in recognition of their aerodynamic design of the Gulfstream G650 wing.

Professor Sanjiva Lele received the AIAA Aeroacoustics Award for 2016, “for developing high-accuracy computational methods for direct and hybrid noise predictions, and for advancing the understanding of noise generation mechanisms in high-speed jet flows.”

Assistant Professor Mac Schwager, whom we hired less than two years ago, was one of only six named finalists for the Best Conference Paper Award from the IEEE Robotics and Automation Society for his work titled “Cooperative Multi-Quadrotor Pursuit of an Evader in an Environment with No-Fly Zones,” which he presented at the IEEE International Conference on Robotics and Automation this May in Sweden.

Professor Emeritus Brad Parkinson was awarded the Marconi Prize for his role in guiding the development of GPS from an orphaned project to a technology that is deeply seated in nearly every aspect of modern life. This annual prize recognizes advances in the communications field that benefit humanity.

Two months ago, we learned that Professor Emeritus Walter Vincenti was selected to receive this year’s Daniel Guggenheim Medal, one year after Professor Antony
Jameson received the same medal. This brings to six the total number of Guggenheim Medals awarded to our faculty (William F. Durand, Nicholas J. Hoff, Holt Ashley, Arthur E. Bryson, Jameson, and now Vincenti), a record that is perhaps not equaled by any other academic, industrial, or government institution.

Last month, Professor Charbel Farhat was selected as one of only two International Fellows with the 2016 class at the Royal Academy of Engineering (UK), “for pioneering research contributions in the area of fluid-structure interaction and for the application of this research to the solution of problems in aeronautical, naval, and mechanical engineering, as evidenced by high-impact research and publications and software developed for use by major industries.”

STUDENTS IN THE NEWS

During this past year, Ross Allen and Assistant Professor Marco Pavone’s work on real-time motion planning was featured by a wide range of media outlets, including the Discovery Channel and The Economist. This, after a short video of their sword-dodging drone made it to the top post of reddit, receiving more than 2 million views.

Ashish Goel won at the Student Competition at CEDAR one of the outstanding poster awards for research titled “Measurements of Hypervelocity Impact Plasma Using a Plasma Spectrometer.”

Ben Hockman received the Best Student Paper Award at the Field and Service Robotics Conference for his paper, co-authored with Assistant Professor Marco Pavone, titled “Design, Control, and Experimentation of Internally-Actuated Rovers for the Exploration of Low-Gravity Planetary Bodies.” Both were also invited to the U.S. Senate to present their work on space robotics to congressional leaders and top NASA officials.

Alan Li received the Outstanding Paper Award for Young Scientists from the Committee on Space Research (COSPAR) for his paper titled “Mean Thermospheric Density Estimation Derived from Satellite Constellations in the Space Environment.”

Rachael Tompa won the Best Paper Award in the Special Topics and Space track of the Digital Avionics Systems Conference in Prague, for co-authoring the paper titled “Optimal Aircraft Rerouting During Commercial Space Launches.”

COMMENCEMENT HIGHLIGHTS

We are proud of all of our students and wish to share with you some academic year-end highlights. At last year’s Commencement, the department awarded 3 BS (interdisciplinary major in AA), 40 MS, and 19 PhD degrees. The department diploma ceremony, packed with proud family members and friends, took place on June 12 in the NVIDIA Auditorium in the Jen-Hsun Huang Engineering Center.

• Joseph George Kocheemoolayil received the William Ballhaus Prize for the best doctoral thesis, titled “Large Eddy Simulation of Airfoil Self-Noise.” His advisor was Professor Sanjiva Lele.

• The Nicholas J. Hoff Award for the master’s student with the highest grade point average went to Anthony Corso.

• Heather Kline received the Cannon Summer Fellowship for academic achievement and service to the department. This award is endowed by the Chiang family in memory of Wen-Wei Chiang, PhD ’86.

• Ana Tarano received the Sharon Kay Stanaway Award. This award is named after the late Dr. Sharon Kay Stanaway, PhD ’88, the beloved wife of our colleague
Professor Ilan Kroo. It is presented annually to an exceptional graduate student who shares Dr. Stanaway’s interest and enthusiasm for aerospace engineering.

- Each year, the student chapter of the AIAA presents teaching awards. The Best Instructor Award was presented last year to Dr. Gregory Zilliac from NASA Ames.
- The Outstanding Course Assistant Award went to Pavan Narsai.
- Each year, all departments in the School of Engineering are invited to nominate students for the Centennial TA Award. AA master’s student Cheng Liu (who is now a PhD student in Mechanical Engineering) was selected as a Centennial TA for his contributions as a teaching assistant for AA courses.
- Tatiana Wilson was awarded the Outstanding Staff Service Award. She came to us less than two years ago. But with her intelligence and strong will to make a difference, she was able to hit the ground running.

STAYING CONNECTED

Please visit our website at aa.stanford.edu regularly for updated information about the department. From this site, you can link to many sources for detailed information about our faculty, students, research programs, and teaching initiatives. I welcome your suggestions regarding the department’s directions and activities. As a member of the AA family, you are always welcome to visit when you are in the area.

I hope that you will remain active members of our alumni community by keeping us apprised of your activities, promotions, and whereabouts. You can log on to Stanford Engineering Alumni Connect to update your contact information. Thank you for keeping in touch.

Finally, I would like to thank the many dedicated alumni and friends who support the Department and Stanford Engineering in so many ways. We look forward to your continued engagement and wish you the very best in the year to come.

With best regards,

Charbel Farhat

Vivian Church Hoff Professor of Aircraft Structures
Chair, Department of Aeronautics and Astronautics

Department of Aeronautics and Astronautics
Durand Building
496 Lomita Mall
Stanford, CA 94305